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Recommended Citation

8 Tex. J. Women & L. 305 (1998-1999)

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WOMEN AND THE INTERNET

Carlin Meyer*

I. Access to the Net	2
A. The Importance of Net Access, Especially to Women ..	2
B. Women’s Lack of Access to the Net	4
C. Implications for Law?	6
II. Information Overload and Ways to Handle It	8
A. The Phenomenon of Overload	8
B. What Has This to Do with Women?	9
C. But What Has All This to Do with Law?.....	10
III. Commercial Capture of the Net	12

I was originally invited to speak about pornography or harassment on the Internet. These are the topics most frequently associated with women and, given my previous writing about Internet porn, logical for me to address. But I declined to speak about them because I don’t think sex and violence are the main Net-related issues with which women should be concerned.¹

Rather, I hope to convince you to focus on three other issues: first, ensuring universal and meaningful access to the Net; second, addressing the pervasive societal and Net-enhanced problem of information overload—with its concomitant demand for filtering and screening methodologies; and third, controlling and limiting commercial domination of the Net. Privacy is a fourth important issue, but, fortunately, that is the subject of the previous panel, so I need not address it.

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1. This is not to say these topics are not important. But the fact that legislatures first passed mini-CDAs (Communications Decency Acts) and are now putting at the top of their Internet agendas legislation to protect children from online harassment does not mean that these are the issues of greatest importance. See Jeri Clausing, *State Legislatures Across U.S. Plan to Take Up Internet Issues*, N.Y. TIMES, Jan. 24, 1999, at 23.

You will notice that these issues are not ones traditionally thought of as "women's issues." And you will rightly suspect that part of my agenda today is to explode those categorizations and insist that issues of economics, antitrust, and media ownership, among many others, are women's issues.

Women were largely excluded from the game when the rules governing the development of modern communications media were established. But we have the chance to influence and perhaps even shift the direction and the discourse about the governance and development of new communications media like the Internet, to add different perspectives and urge different priorities.

I fear that in the time allotted today, I can only briefly introduce each of the three themes I propose as central. Hopefully this will be sufficient to spur you to further thought and exploration. I also have one disclaimer: I am not a Net-expert. Rather, I took the opportunity the *Journal* kindly offered me to begin to gather my thoughts about the broader import of the Net for women. I thank you, in advance, for your indulgence.

I. Access to the Net

A. *The Importance of Net Access, Especially to Women*

Because it is such a speedy and inexpensive means of storing and communicating information, the Net is rapidly becoming an essential element of modern living. Already, you can take a civil service examination online, earn a degree, get medical advice, order a pizza or groceries, and track lost social security and unemployment checks. Numerous government services at all levels of government are online. You can file loan applications, obtain administrative decisions, order publications, and search a job bank. You can get tax forms, file your return, and even find out about refunds.² In some states, you can pay speeding tickets, register your car, obtain license plates, and renew your driver's license online.³ And several states, such as New Jersey, have announced plans to have all government services online. Experiments in voting online are already underway in California, and other states such as Florida are considering following suit. Even the military is considering Net-voting for its overseas personnel; can it be long before national elections are online?

2. See Elizabeth Wasserman, *Paying the Price, in Behind the Wave: Consequences of the Digital Experience* (visited Jan. 19, 1999) <<http://cgi.sjmercury.com/archives/digitalage/ch1/sanctions.htm>>.

3. See Peter Fabris, . . . and *Just IS for All* (last modified April 1, 1998) <http://www.cio.com/archive/040198_ec_content.html>.

None of this is surprising: apart from the convenience for customers in avoiding long lines and travel to obtain services, it's a lot less expensive for government (not to mention the trees that are saved.) The cost of a driver's license renewal on the Web is one-fifth of the agency's cost of processing by mail.⁴ One business noted that the \$5.90 cost of a human transaction dropped to 14 cents on the Internet. As businesses and government seek to reduce costs and streamline operations, they are even more likely to shift services to the Internet.

The Net is becoming an essential tool for job searches: a growing number of jobs are advertised exclusively on the Net. Many companies seek electronic applications and resumes; some even require them, asserting that, in addition to speed and paperwork reduction, it virtually guarantees that applicants are computer literate—though I wonder if they've considered the help some of us may be getting from our children. California's state employment offices are now computerized, and job seekers are required to search online before seeing a counselor. America's Job Bank, a federal service, contains more than 600,000 postings and is growing.

Real estate notices are increasingly placed on the Net. In areas such as New York where affordable housing is scarce, those with instant access have an enormous advantage. Indeed, the Net may well displace newspapers as the primary source of classified advertising. Financial services, too, are online. Fifty-five percent of households that have computers manage their finances online; banks and businesses are beginning to press customers to use Net services by charging fees for walk-ins. You can order a copy of your credit report on the Net, obtain mortgage rate information, buy and sell securities, and find out about almost any subject.

E-commerce, as Internet purchasing is called, offers advantages beyond mere convenience to online buyers—discounted prices for everything from books to airline tickets, customized services, and essential items such as groceries and household appliances.⁵ Online directory assistance to cities throughout the world is free, as are numerous other services.

The Net offers hundreds of resources specifically for women: from all-encompassing sites like iVillage to parenting, health, and education services, sites representing dozens of professional organizations seeking to further women's careers, online magazines (Web zines) aimed at teens and young girls, and others aimed at more specific groups: topless dancers, domestic workers, and actors. There is even a web guide, *Femina*

4. *See id.*

5. For instance, FastWEB does free customized searches for grants and scholarships (subsidized through advertisers); offline, their searches cost \$45. *See Wasserman, supra* note 2.

(femina.cybergrrl.com) with indexes and links to literally hundreds of sites "for, by and about women."⁶

And this is not even to address the chat rooms and other important social functions of Net communication, which are of obvious importance to women in terms of relieving isolation, providing knowledge and support, and enabling organizing for the betterment of women's lives. Indeed, media mogul Geraldine Laybourne has argued that "the Internet is a natural place for women . . . because they care so much about relationships and staying connected."⁷ Anthropologist Helen Fisher echoes this view, noting that "the Internet lets women use words, which is their natural tool."⁸

Every three months, Internet traffic doubles; by 2001, the volume of U.S. data traffic is expected to surpass that of voice transmission.⁹ Plainly, those lacking the wherewithal to use the Net will lag far behind those with access, and the gap is likely only to widen. These concerns affect all women, but are especially great for the many women living near or below the poverty line. Nearly nine million households with children are headed by women; 41% of these households earn incomes below the poverty line.¹⁰ They, along with the elderly, an increasing majority of whom are women,¹¹ and the disabled are dependent on the government and social services that can be accessed online,¹² and they lack the mobility to otherwise obtain them.

Moreover, although we purportedly live in a post-feminist world, women still hold up far more than half the sky when it comes to childrearing. Women will be crucial to ensuring to the children of the future the competence to use the technology and, equally important, guidance in how to use it wisely.

Finally, the Net can be an extraordinary tool of empowerment. Because of its interactive nature, it creates unusually positive conditions for

6. Nina Teicholz, *Women Want It All, and It's All Online*, N.Y. TIMES, Mar. 22, 1998, at G10.

7. John Tierney, *The Big City: Women Ease Into Mastery of Cyberspace*, N.Y. TIMES, Dec. 17, 1998, at B1.

8. *Id.*

9. See Mary Beth Regan, *Can the Telecom Act Be Salvaged?*, ATLANTA CONST., Feb. 7, 1999, at 1D.

10. See JOSEPH DALAKER & MARY NAIFEH, U.S. DEP'T OF COMMERCE, POVERTY IN THE UNITED STATES 11, tbl. C-3 (1997).

11. In 1997 there were 20.1 million older women (compared to 14 million older men); by 2030 there are expected to be 70 million older persons, the vast majority of whom will be women. See Administration on Aging, *Profile of Older Americans: 1998* (visited on Sept. 17, 1999) <<http://www.aoa.dhhs.gov/aoa/stats/profile/default.htm>>.

12. In 1996, 1.7 million women were receiving social security disability benefits; the number of women who are disabled but not eligible for such benefits is far larger. See SOCIAL SECURITY BULLETIN, ANNUAL STATISTICAL SUPPLEMENT tbl. 5.D6 (1997).

learning (with pacing adapted to the user), for confidence building, and, hence, for self, as well as group, empowerment. Conversely, as the Net displaces the telephone as a means of communication—as it inevitably will because of its greater efficiency, novel features, and lower cost—those left behind will be literally shut out of the mainstream, their ideas unheard, their views unregistered.

B. Women's Lack of Access to the Net

Net access is not merely or even mainly a matter of having a computer, a modem, and the infrastructure and software to link to the Net. It also requires the wherewithal—the training and Net literacy—to make use of them, as well as to pay for the continuing costs of access.

As of 1997, the date of the most recent comprehensive study, only 26.3% of households were online at all. Of these, the vast majority were those with incomes above \$35,000, and, not surprisingly, the most-linked homes were those with incomes above \$75,000 (at 50.3%). As noted above, most women are not living in these households; many women live in female-headed households with children, only 86.3% of which even had telephones.

Of course, access can be had in other ways: through libraries, cybercafes and Internet-linked computers in other locales. While eventually airports, bus and train stations, even laundromats, hair salons, and other such places may be linked, at the moment, free sites are few (an Illinois experiment in shopping malls failed). With cutbacks in public funding, even where there are hook-ups, hours are limited, and sessions must be short to accommodate all users, and hardware and software are soon out of date. School hook-ups, too, tend to be concentrated in well-off communities. Equipment in those inner city public schools lucky enough to have it is often obsolete before it is even installed. (The industry's rule of thumb is that computer processing speed doubles every two years; users who ten years ago replaced equipment every five years now replace in two. Software upgrades often occur yearly, necessitating annual retraining.)¹³

Cybercafes are few and can be costly. And while efforts have been made by non-profit groups to create free sites, sometimes called "free-nets," and train residents to use them, many of these efforts have foundered on lack of resources.¹⁴ Those that remain are typically dependent on foun-

13. See DAVID SHENK, *DATA SMOG: SURVIVING THE INFORMATION GLUT* 84 (1997).

14. See Anne Beamish, *Approaches to Community Computing: Bringing Technology to Low-Income Groups*, in *HIGH TECHNOLOGY AND LOW INCOME COMMUNITIES: PROSPECTS FOR THE POSITIVE USE OF ADVANCED INFORMATION TECHNOLOGY* (Don Schon et al. eds., 1998).

dation support; hence, their continued existence is precarious. Commercially supported free-nets such as Neighborhood Link, which serves 1186 Denver neighborhoods, are few and have not directly addressed Net literacy or access beyond local libraries.¹⁵ And they themselves are endangered both by the monopolization of Net access by large companies and by their dependence on advertising.

Moreover, as Bruno Tardieu and others have noted, in the absence of well-trained, motivated teachers, equipment and software are meaningless, and inadequately trained inner city kids are likely to remain largely consumers of video games, while better-taught kids will have learned to use Net technology to organize their knowledge, create and search data banks, and build skills and confidence.

To the extent that access is a function of training and expertise, girls in general are being left behind. While the press reports rosy statistics suggesting that female Internet use has reached and may soon surpass that of males,¹⁶ other figures suggest that, when it comes to Net expertise, women lag far behind. This becomes important not merely as a matter of access, but because computer and Net-related jobs will supply a considerable percentage of the jobs of the future. The Bureau of Labor statistics lists computer scientists, computer engineers, and systems analysts as the three occupations with the fastest employment growth for the years 1996 to 2006. By 2010, one in four jobs will involve the use, design, application, or maintenance of computers. Yet the numbers of women gaining degrees in computer science have been dropping in absolute as well as relative terms. A study recently released by the National Science Foundation reported that women went from earning 37% of degrees in computer science in 1985 to earning only 28% in 1995, and that the absolute numbers dropped by 50%, from 14,431 to 7,063!¹⁷ A mere 7% of computer science and engineering faculty are women, who are only 3% of those tenured.¹⁸ Although women enroll in college at higher rates than men and take more advanced placement courses, three times as many men earn computer degrees as do women.

The picture is equally dismal for the next generation. While young girls are using computers almost as much as boys, at adolescence a gender

15. See William R. Long, *For Neighborhoods in Many Cities, Virtual Community Centers*, N.Y. TIMES, Mar. 4, 1999, at G7.

16. See Tierney, *supra* note 8.

17. See Susan T. Hill, *Science and Engineering Bachelor's Degrees Awarded to Women Increase Overall, but Decline in Several Fields* (visited Nov. 7, 1997) <<http://www.nsf.gov/sbe/srs/databrf/sdb97326.htm>>.

18. See Computer Professionals for Social Responsibility, *Women and Computing* (visited Mar. 4, 1999) <<http://www.cpsr.org/program/gender/index.html>>.

gap appears which widens with age. Studies show that boys have more positive views of computers than do girls and that girls lag behind in both use and access. A 1998 AAUW study revealed that girls make up only a small percentage of students in computer science and design courses. Only 17% of high school students who took the Advanced Placement Computer Science test in 1997 were females, the lowest percentage among all the science tests given.¹⁹ These statistics are all the more problematic because those who teach our children are still female by a margin of three to one.²⁰ If they lack Net expertise, who will ensure that our youth become Net-literate?

Of the estimated 200 million Americans who today lack Internet experience, women are over-represented.²¹ This is even more true for women of color, especially if they are living in communities of color. Only 10.3% of black households and 12.3% of Hispanic households had computers as of 1997. This is partly a function of wealth: 64.1% of black households and 72.8% of Hispanic households with incomes above \$75,000 own computers (compared with 76.3% of white households in the same income group). But Internet connection statistics, which show that only 7.7% of black households and 8.7% of Hispanic households are online (compared to 21.2% of white households), may also result from the fact that many minority communities lack the infrastructure necessary for effective Internet access.

And if we shift our focus to the global community of women, the picture becomes far worse. As of 1995, much of Africa and portions of Asia had no connectivity at all; other parts of Africa, Latin America and Asia had only e-mail connection. For these women, the poverty and education gap is likely only to widen as access to the Net becomes ever more central to joining the world community. For women living in cultures that deny them human rights, the Afghani Taliban being the most well known, Net connection means connection to a world which recognizes and affirms their humanity and means the ability to organize and resist. Such connection carries with it the danger of Western cultural and commercial domination, but the Net's potential to promote freedom for women through providing information, fostering dialogue, and enabling organization is surely, to these women, worth the risk.

19. See Cynthia Lanius, *GirlTECH: Getting Girls Interested in Computers* (visited Mar. 4, 1999) <<http://math.rice.edu/~lanus/club/girls.html>> (citing College Board study).

20. See OFFICE OF EDUC. RESEARCH AND IMPROVEMENT, U.S. DEP'T OF EDUC., DIGEST OF EDUC. STATISTICS [NCES 98-015], 77, tbl. 67 (1997) (dating 1993-94).

21. See Wasserman, *supra* note 2.

C. Implications for Law?

What are the implications for law? Universal access—access that ensures that all communities and persons not only are connected, but are trained to make use of that connection—won't happen without government intervention and redistribution. Being connected to the Net isn't like owning a television; it is more costly to pay for connection, more costly still to remain up-to-date in hardware, software, and, most importantly, training. Not only is the private market unlikely to take up the slack, without government intervention it may well make things worse—witness the effort of AT&T to monopolize high speed cable access and to require all users of its cable systems to purchase its "At Home" service provider at a monthly \$40 fee. And cable competitors such as the newly mega-merged Comcast are expected to raise rates, not lower them, as cable industry regulation ends this year.

Nor will private philanthropy be able to handle the need. Foundation support for libraries, schools, and neighborhood networks is minuscule in relation to what is needed. For instance, although the Gates Foundation is supplying libraries with relatively up-to-date hardware, libraries, along with schools and public access providers, lack the wherewithal to pay for upgrades and user retraining, let alone keep up with rising costs of network access. Moreover, universal access that is meaningful to women may require home access; publicly provided terminals with limited hours and long lines are unlikely to be adequate.

Issues confronted decades ago in developing rules for telephone access need to be revisited in relation to today's technologies. What is the most cost effective way to ensure access? Should inner city or business users subsidize rural infrastructure? Should government impose user fees or taxes on service providers or business users?

Some argue that because of the United States' historic commitment to universal telephone access, and because an effective political coalition made up of rural conservatives and urban liberals supports it, universal access to infrastructure, hardware, and even subsidies to ensure minimum coverage of the costs of connection will be forthcoming. But not only must we, as women, be making sure it is, we have a special responsibility to our less well-off sisters to make sure that what they get isn't of inferior quality and value, hard to use, and perpetually out of date.

Moreover, universal access is meaningless unless accompanied by adequate education, that is, teaching that enables users not only to find their way around the Net, but to find and manage information and services to communicate with others, to become empowered. This, of course, is where gender matters a great deal. It is in the interest of marketers to ensure that

girls achieve at least a minimal degree of literacy in order that the future of e-commerce is preserved; so the education task will not be left to government or law alone. But if women are not to be shut out of information age opportunities, we need to ensure that our literacy goes further and enables women to use the technology for more than mere consumption. School policies and practices need to be reexamined with gender in mind: one writer suggests, for example, that where computers are made available only for voluntary use or during non-instructional times, girls get shortchanged. Software selections often favor the interests of boys, but this may not be the fault of the schools: 74% of game characters are male, and software makers seem to favor male-oriented instructional games (fighting and conquest more than practical problem solving in contexts like the home or the school). Yet studies show that girls' use of the Net for educational interchange enhances their willingness to participate in class and other discussion because of the anonymity it affords, and the confidence they thereby gain enables them to abandon the shield of anonymity.

But the dismal statistics I've already cited argue for more dramatic action, for supporting affirmative efforts by educators to overcome the anti-science socialization of girls—from special scholarships to incentives for the development of gender-sensitive software to appropriations for gender evaluations of school programs and software. This, in turn, requires that we support positions in the courts that enable schools, employers, and government to engage in affirmative action. And to those who think affirmative action isn't necessary, I refer you to the MIT report released earlier this week admitting its own pervasive bias against women in science.

Moreover, because a large proportion of women live in poverty, as women we need to ensure that adequate education is provided to all, so that the children of poor women do not fall further and further behind. This means, I think, focusing especially on ways to upgrade the quality of public school equipment, but, most importantly, the quality of training. A 1998 study by ETS, the largest study to date of computers in schools, concluded that the billions spent on educational technology is actually hurting many kids because it is put to poor use. Perhaps we need to legislate school-based equity, perhaps join those demanding and suing under state constitutions to enforce equity in education. Perhaps we need legislation aimed at corporations selling the technology to schools, mandating that sales be accompanied by a certain level of mandatory continued training in effective use for teachers and students alike.

Moving to the global arena—universalizing Net access has not been high on almost anyone's agenda. The UN conferences on women have largely failed to address it, understandably, given that 70% of the 1.3 billion people living in poverty and two-thirds of the world's 960 million

illiterate adults are women. Yet, if, as a society, we don't absorb the cost of universalizing access in a meaningful way, we will reinforce and perhaps render unbridgeable the income and opportunity gap that has risen so dramatically in the past two decades, and women in large numbers are likely to be on the wrong side of the divide.

As Ernest J. Wilson, director of the Center for International Development and Conflict Management, noted in opening a conference on computers and the global economic gap, the Internet has the potential to become a "new engine of global inequality." It is up to us, women from one of the world's wealthiest nations, to place ourselves in the path of the train. If we don't, it will disproportionately be women who get run over.

II. Information Overload and Ways to Handle It

A. *The Phenomenon of Overload*

At the same time that the Net offers great potential, it also represents part of an increasingly pervasive problem: that of information overload. It is by now commonplace that one weekday edition of any major newspaper contains more information than the average seventeenth century English person was likely to come across in a lifetime.²² But more salient, perhaps, is the increase in what one writer has called "data smog" during the latter half of our century. We have gone, writes David Shenk, from information scarcity to information overload in a matter of a couple of generations.²³

In 1971, for example, the average American was targeted by fewer than 600 daily advertising messages; today, that number is well over 3,000 and growing. Data processing has outstripped the provision of material goods and now accounts for more than half the United States' GNP.²⁴ Not only are messages more plentiful, they are delivered at greater speed: computer processing time has doubled every two years for the last thirty; broadcast advertisements compress the same content into fewer seconds (from 52.3 to 25.4) so that we see more of them. In the last seven months of 1996, the number of documents on the Web grew at more than a 100% annual rate.²⁵ In 1995, there were about 100,000 Internet domain names; by 1999 there were 4.8 million and growing at the rate of about 70,000

22. See Mike Antonucci, *Swamped!*, in *Behind the Wave: Consequences of the Digital Age* (visited Jan. 19, 1999) <<http://cgi.sjmercury.com/archives/digitalage/ch5/overload.htm>>.

23. See Shenk, *supra* note 14, at 27.

24. See *id.* at 29, 30.

25. See *How Much is Too Much?*, in *Behind the Wave: Consequences of the Digital Experience* (visited Jan. 19, 1999) <<http://cgi.sjmercury.com/archives/digitalage/ch5/toomuch.htm>>.

registrations per week!²⁶ More than 62,000 books were published in the United States in 1995, not counting the nearly 90,000 small press, think tank and association-based reports and books, about 3,000 per week.²⁷ Many of these are available to read or download from the Internet; most are available for speedy online purchase. Meanwhile, the Net features thousands upon thousands of articles and online publications. Daily e-mail transmissions are at 2.1 billion in the United States alone!

Human beings can process only about fifty bits per second of information; that's as fast as our brains will go. We are thus overwhelmed by the sheer amount and velocity of information. The existing psychological data suggest that, among other things, we suffer from increased anxiety and depression.²⁸

Moreover, as anyone who has surfed the Net can tell you, it is extremely difficult, and becoming more so, to sort out good information from bad, useful from useless. As Nobel Prize winning physicist Murray Gell-Mann notes, "the flow of unreliable information is pervasive and extremely destructive. Distinguishing the real from the crackpot is a fantastically difficult job these days."²⁹ Search engines tell little, if anything, about the veracity or value of information retrieved. Simply discarding the useless, whether unwanted e-mail or useless search results, takes enormous energy and substantial time. Sifting through, organizing and evaluating the potentially helpful is still more demanding.

Overload thus raises three major concerns: first, how to ensure that users are able to find what they want (this might dictate laws either forbidding search engines from permitting commercial distortion of search results or requiring that they disclose their practices; it might require that government establish its own search engines, although First Amendment issues would have to be addressed); second, enabling users to evaluate the veracity and reliability of that which is retrieved; and third, protecting users from information they don't wish to receive (for example, unwanted e-mail messages, produced by the practice known as spamming).

But there are other concerns for those who care about the legitimacy of government and its laws. As several Net scholars have noted, overload has begun to create increased social segmentation, with potentially disastrous effects for democracy. In order to cope with information overload we

26. See Richard Raysman & Peter Brown, *Developments in Trademark and Domain Name Disputes*, N.Y. LAW J., Mar. 9, 1999, at 3.

27. See Fabris, *supra* note 4.

28. See Shenk, *supra* note 14, at 37-38. Shenk points to studies attributing the following reactions to sensory and information overload: cardiovascular stress; confusion; frustration; impaired judgment; decreased benevolence; and overconfidence.

29. Antonucci, *supra* note 23. See also Shenk, *supra* note 14, at 26.

must be brutally selective in the information we allow to penetrate. To this end, we tend toward niches, selecting only that which we already know we are interested in, or only information we find palatable, easily comprehended, readily assimilable to pre-existing beliefs, neither challenging nor troubling. We become what one writer has termed "intellectual hermits."³⁰ As we substitute highly individualized "niche" activities that tend to fragment us for "group experiences that tend to unify us," we all "lose track of the general condition of our communit[ies]" and, thereby, become, in effect, "less viable citizens."³¹ And to the extent that we find commonality, it is frequently based on a superficial sort of discourse—the skimming of headlines and images and the abandonment of analysis and depth—which at least one writer worries may affect democracy.³² Thus while on one hand the Net produces democracy-enhancing capability to organize and communicate across time and space, on the other it tends to diminish the necessity to hear from, engage with, and mediate among those with whom we share a national and global community, and thereby to limit the strength and depth of democratic discourse.

B. What Has This to Do with Women?

Since women make up half of the population, these issues are important to women simply as global citizens. We cannot afford to ignore issues of citizenship and democracy, of community and individual. Further, because women remain the dominant family teachers, school teachers, and consumers, information accuracy is of critical importance to us. If we are to depend on Net information about health, about products and services, about news, and even the veracity of personal mail, we must be able to trust its reliability.

We must also be able to pass on to our children that most important twenty-first century skill: that of sorting, evaluating and critiquing information—media literacy. The *New York Times* recently reported that racist pages are growing in sophistication and may lure the unwary.³³ A site purporting to be a historical examination of Martin Luther King turns out to be sponsored by white supremacists who describe King as "just a sexual degenerate, an America-hating communist."³⁴ A brightly crayoned site for The World Church of the Creator features a "Creativity for Children" site that links to Nazi propaganda. Other sites offer popular computer games

30. Antonucci, *supra* note 23.

31. *Id.*

32. See Shenk, *supra* note 14, at 124.

33. See Michel Marriott, *Rising Tide: Sites Born of Hate*, N.Y. TIMES, Mar. 18, 1999, at G1.

34. *Id.*

altered to make blacks, Jews, and other minority groups game targets. Commercial sites are equally sophisticated in their appeal to children.³⁵ To offer effective assistance to our kids, we need to have surfed and seen these sites ourselves, to assist them in learning to trace the sources, evaluate credibility, analyze arguments, and critique perspectives. And we need to be literate about methods to filter out the bad or at least direct our children to the better sites.

Yet, we also need to be Net-literate in order to ensure that our kids don't cope by simply shutting out new information altogether, retreating into games or consumerism and avoiding the richness and challenge that the Internet offers. Hopefully as the new millennium progresses, the task of teaching children to screen for accuracy and value and to avoid the potentially debilitating psychodynamics of overload will be more equally shared between men and women; but at the moment we constitute the vast majority of teachers, both within and outside the home.

C. *But What Has All This to Do with Law?*

As we move to a world in which information is received in disembodied digital bits, abstracted from any worldly context which might give us clues and cues as to its value and true meaning, and in which the sheer number of bits is already far too great for any individual to cope with and growing at an exponential rate, filtering mechanisms become increasingly critical to our ability to make use of information and avoid retreat into ignorance as self defense. But how will we select the selection methods? What sort of filtering is appropriate, and who will create the filters? Should law require filtering methodologies to be disclosed, or are they proprietary concerns? Should law require that sites rate themselves, or be rated by independent rating services? How could such laws be effectively enforced given the proliferation of data and domains? Should computers, like televisions, contain the hardware and software necessary to enable users and parents to filter? What constitutional issues are raised by government regulated filtering agents? Are we satisfied with privately developed and regulated filters? Do or should they raise concerns equivalent to those we raise concerning government involvement?

Among lawyers, this debate has largely gone on in the context of screening *out* information viewed as harmful—in the United States, pornography and indecency; in Europe, promotion of violence and fascist or Nazi ideology. But the issue is equally or perhaps more important in the context of filtering *in*—in rating sites so that the public can select among them, in developing search methods that can ascertain value and that avoid

35. *See id.*

distortion by commercial or other interests. Here, law must catch up with the "techies."

First, filtering raises numerous First Amendment issues whenever engaged in by governmental agents, whether they are libraries, universities, or government offices. All of the basic filtering techniques in use tend to be over and underinclusive, whether they filter by address, blocking all but the acceptable or none but the unacceptable, by words and word groups, or by entire Net areas deemed off-limits. None can keep up with the growing number of sites and domains, and all tend to screen out the good with the bad because of their focus on content abstracted from context. Thus, for example, programs that screen out nudity tend to keep out museum and art archive sites, as well as scientific ones.

Platform for Internet Content Selection (PICS) rating systems suffer similar problems. PICS, a method supported by the World Wide Web Consortium, is based on labels provided by the site publishers or by independent reviewers. It allows recipients to create filtering rules which specify which labels should be permitted or blocked, for example, whether level three violence or level two graphic sex should be allowed in. Though users, rather than software manufacturers, determine what is filtered out, as with other systems, ratings can never keep up with publishing, so valuable new sites will be blocked because they are not rated, while ratings for older sites will quickly become out of date as new material is added to those sites. Moreover, the ratings themselves are subjective and enforcement in cases of false labeling is a virtual impossibility.³⁶ Most importantly, neither PICS nor any of the other systems currently in use purport to label for value and informativeness, things we may most wish to know.

Many argue that the First Amendment forbids governmental entities (except perhaps when acting as employer) from engaging in any filtering beyond placing time, place, and manner restrictions on use of its links. But is government prohibited from developing and implementing helpful filtering to assist library patrons and university students in finding what they need as a matter of efficient resource use and good service? For instance, why shouldn't a library or university be able to restrict access to commercial sites or designate one terminal for commercial access, but keep the remainder commercial free? Could government go further, and publish a list of valuable and useful sites? And to the extent that government enforcement is necessary to prevent fraud and abuse, will government delega-

36. If, as a recent study has found, even major television providers don't label their shows accurately according to the comparatively straightforward system developed for the V-chip, can we expect that hundreds of thousands of individuals, or even a few competing groups, will accurately evaluate based on the more complex system developed for PICS? See Paul Farhi, *Sex, Violence and Family Viewing*, WASH. POST, Mar. 14, 1999, at W11.

tion of content rating to private raters insulate it from responsibility for their actions if they err, censor, or commit fraud?

There is some hope that more nuanced search engine and filtering systems are in development: based on personal, adaptive, and collaborative methods that are able to prioritize according to recorded reactions of earlier users of sites, as well as by cruder measures such as number of times a site is accessed, time spent on-site, the number of return visits by the same user, and the like. Governmental entities will need to make choices about their use, thus, implicating the First Amendment. We as citizens may need governmental assistance in evaluating them, ensuring their availability, protecting them from commercial capture, and possibly engaging in affirmative action to make sure that women's choices are recorded when user reactions are measured.

On the macro level, we need to be thinking about ways to protect ourselves and our partners and children from the effects of data smog; this will likely include legal regulation. Spamming scandals, as well as the proliferation of false rumors and other instances of deliberate falsification, have made clear that Net self-regulation is not an adequate solution. We need to press for laws that maximize our ability to evaluate the authenticity of Net information and to ensure our ability to rely on retrieval methods.

Shenk, author of the book *Data Smog*, argues that government should intervene not only to create and protect smog-free places such as public parks, roads, and libraries, but also to prevent or limit data-surveillance, which the Net makes yet easier to engage in, and to prevent consumer fraud, which, because of the Net's vastness and anonymity, is also simpler to carry out on the Net.

I would go further and, as suggested by the next part of my talk, urge that we explore establishing government-sponsored and regulated, commercial-free zones on the Net.

III. Commercial Capture of the Net

Herbert Hoover, speaking in 1922 of radio, the then new broadcast medium, said, "It is inconceivable that we should allow so great a possibility for service, for news, for entertainment, for education, to be drowned in advertising chatter." It is an unfortunate reality that the Internet is already drowning. Use almost any search engine and the results of your search will be surrounded by advertising banners, complete with moving graphics and hyperlinks designed to lure or fool us into accessing its site. Its owner may well have paid thousands of dollars to gain banner placement or made a "targeted buy" to gain top placement on search results or within search engine directory categories. A 1997 survey of business executives indi-

cated a dramatically rising rate of Net advertising,³⁷ and anyone who spends time online knows that the number of ads is skyrocketing. And because the Internet is such a rich source of useful information about consumers, in part because of its interactivity and in part due to its tracking capabilities, advertisers are likely to continue to find new ways to use it. Advertisers even sponsor e-mail discussion groups to glean information and audience.

Indeed, turn on your e-mail, and you are likely to find your mailbox filled with unwanted commercial messages. Advertisers buy e-mail address lists just as they do for snail mail, but, because they are able to reach thousands instantaneously at virtually no incremental cost, there is little incentive to target with care, avoid duplication, or otherwise limit the number of messages. A recent online ad offered to e-mail to 50,000 "fresh" addresses for \$89, and 1,000,000 for \$505.

But so what? There are two problems. One is that of commercial clutter: all that advertising makes it harder to use the Net for other purposes. More on that in a moment.

The second issue, however, is of greater concern. Much of the Internet survives on advertising; numerous valuable sites would go under without it. As a result, they are at the mercy of advertisers, who may well influence content, as they have in magazines and newspapers. More important, to the extent that large commercial entities such as Disney, which has sponsored its own search engine, and others come to dominate the Net in sophistication and audience capture, and other large companies control access to the Net as well as the provider services that allow us to use it effectively, Net content and dispersed control will be affected, and the Net's potential undermined.

Or will it? After all, U.S. media are typically commercially supported, and this has had beneficial effects. It has subsidized the provision of free television news and entertainment services to anyone with a television set; it has made affordable high production values; and some argue that it has paid for higher quality programming than would otherwise be available. High quality Net sites are likewise supported by private advertising; free access to a large number of sites is possible only because of commercial support.

There are three reasons why, as women and as citizens, we should be concerned about commercial domination of the Net. First, many argue that the quality of media production, especially, but not only, its provision of news and information, has been undermined by commercial domination:

37. See Robin Zeff & Brad Aronson, *Your Ad Here*, HOME OFF. COMPUTING, Jan. 1998, at 73.

that critical news analysis has been largely displaced by bland entertainment news features; that critical coverage of media conglomerates and their interlinked allies is lacking; that the range of viewpoints and subject matters is constricted; and that public interest programming is practically nonexistent.

To the extent that these critics are right—and I believe the evidence is overwhelming that they are—we may wish to avail ourselves of the opportunity to keep one medium, one developed with public funds and constituting, like airwaves, a public resource, from capture by a small number of conglomerates. Today, fewer than ten transnational media conglomerates dominate much of our media; fewer than two dozen account for the overwhelming majority of our newspapers, magazines, films, television, radio, and books.³⁸ In this context, it is all the more critical that the rich source of information that the Net can be is not captured and limited. Yet, three mergers of communications giants are underway, which, if allowed by the Justice Department, would permit two companies to control two-thirds of America's phone lines, and one, AT&T, to dominate cable Internet access.³⁹ The Consumer's Union argues that these giant companies seek to control content as well as to profit by monopolizing access to the Net.⁴⁰

While there may be efficiency gains to mergers—after all, we don't want duplication of infrastructure or hardware and software that doesn't interface—and while pervasive advertising is what enables many Net sites to be free, the dangers are such that these efficiency gains may be outweighed. Lack of competition is likely to drive up prices. In the three years since the 1996 Telecommunications Act passed, local telephone rates have risen about 10%, cable rates 21%, and that figure is expected to rise considerably when cable regulation ends this year.⁴¹ If, in addition, Net content and search capability is controlled by a few companies, women will be doubly the losers. Whether or not the Net is today truly "egalitarian," "decentralized," "experimental," and "democratic"; it is not likely to remain so if corporate giants gain even greater control of access and content.

38. See Robert W. McChesney, *Making Media Democratic*, BOSTON REV., Summer 1998, at 4.

39. See Sharon Shaw Johnson, *How You Communicate with the World is About to Change*, DAYTON DAILY NEWS, Feb. 1, 1999, at 6A.

40. See Stephen Labaton, *AT&T Finds Internet and a Crowd of Critics*, N.Y. TIMES, Feb. 4, 1999, at A1. AT&T may control cable access to half or more of the sixteen million households expected to have high-speed cable connection to the Internet by the year 2002. See *id.*

41. See Regan, *supra* note 10.

In addition, commercial domination of a different sort threatens to undermine some of the most valuable aspects of the Net. Just as Congress tried to block junk phone calls and faxes from undermining the values of these technologies for personal and business communication via the Telephone Consumer Protection Act of 1991,⁴² it will need to intervene to protect e-mail, lest it become so overwhelmed by junk that it is rendered useless as a communications tool. While a few states have passed legislation and many more have it on this year's legislative agenda, it has proved far more difficult to gain agreement at the federal level. Most of the proposed federal legislation places the burden on consumers to resist junk e-mail by affirmatively acting to cause it to cease. Given the enormous number of potential first-hits, this becomes very costly to consumers in time and in payment to internet service providers and telephone companies. Women are especially likely to bear the brunt because, as primary family purchasers, we are not only more frequent targets initially, but will receive more messages sent by manufacturers as a result of past purchases. And because e-mail will likely become the primary means of maintaining family contact in an increasingly global world, maintaining its integrity is crucial to women. As more and more states enter the fray, commercial enterprises are likely to press for weak preemptive federal legislation, and women need to be on the alert to press for strict measures.

Similarly, Congress needs to intervene to protect research on the Net from being thwarted by commercial influence on search results. Whether the appropriate course is prohibition, disclosure, or a combination of the two, government rules are necessary because the terrain of the Net is transforming so rapidly that private citizens need assistance in keeping up.

Finally, commercial domination has at least one other pernicious effect that demands regulatory attention: its advertising to children. A great deal can and should be said on this subject, but my time is limited so I'll be brief. Since the late 1960s, increasing attention has been paid by advertisers to capturing the "kiddie market." Children today spend as much as \$81 billion themselves and influence another \$160 billion in family spending.⁴³ Because of children's peculiar susceptibility to advertising⁴⁴—studies have

42. 47 U.S.C. § 227 (1991).

43. See *Web of Deception: Threats to Children from Online Marketing* (visited Sept. 23, 1999) <<http://tap.epn.org/cme/cmwdcov.html>>.

44. Numerous studies have established that children are especially vulnerable to advertising. They indicate that children are able at ages as young as eighteen months to recognize commercial logos, and that younger children are unable to distinguish fact from fiction or recognize a difference between certain types of programming and commercials. See MICHAEL F. JACOBSON & LAURIE ANN MAZUR, *MARKETING MADNESS: A SURVIVAL GUIDE FOR A CONSUMER SOCIETY* 22 (1995). In one study cited by the foregoing authors, children between the ages of four and seven shown a commercial for Cocoa Pebbles cereal said they

shown that young children cannot differentiate between a commercial's persuasive intent and a program's educational, informational or entertainment content—young children tend to believe that advertising claims are authoritative.⁴⁵

While regulatory attention has been paid to television advertising, limiting the number and duration of commercials on kids' programs and, at one time, though no longer, prohibiting the blurring of advertising and content, no such rules apply to the Internet. Moreover, because technology is fast enabling children to surf past television commercials, advertisers are turning to the Internet to attract these "littlest consumers," who offer not only the benefit of immediate purchasing power, but also of lifetime consumption if brand loyalty, which the young are most susceptible to, takes hold.

Children on the Net spend literally hours interacting with "brand characters, brand logos, brand jingles, and brand video," featuring enticing graphics, animation, games, and stories on commercial sites that seamlessly blend entertainment with advertising.⁴⁶ Children spend these hours in what has become known as a "flow state," a term coined by advertiser-employed social anthropologists and child psychiatrists to describe the "highly pleasurable experience of total absorption in a challenging activity" that marketers believe renders children most vulnerable to advertising.⁴⁷ For older children and adults, program commercials are supplemented by infomercials, which blur the line between information and sales pitch. The manipulation of children's minds in the name of sales should be of concern to women for a number of reasons. Not only does it affect their values, fostering materialism and gender stereotyping, among other things, but advertising has contributed to disastrous levels of anxiety, eating disorders, depression, and worse in adolescents girls and adult women.

We need to explore the possibility of establishing commercial-free Net zones, publicly funded so that they remain free, but not necessarily funded out of tax dollars. In discussing funding for public television, many have suggested that because airwaves are a public resource, those to whom we lease them ought to support non-commercial programming; similarly, those who have benefited from the past and current research that has created the Net, as well as from elaborate and evolving copyright and other laws designed to protect copyright owners from the free market effects of

wanted the cereal because "it would make them smile, and Fred Flinstone and Barney Rubble had recommended it" and a third of them thought Fred and Barney were nutritional experts. *Id.*

45. See BRIAN M. YOUNG, TELEVISION ADVERTISING AND CHILDREN 67, 76 (1990).

46. *Web of Deception*, *supra* note 44.

47. *Id.*

the new technology, should return some of what they reap to support a freewheeling, commercial-free Freenet system.

I used to ask my grandmother, who was born in 1893, what it felt like to have witnessed the industrial and transportation revolutions; the inventions of radio, film, and television; advertising; modern medicine; and the changes in gender roles and family life. She would reply, "I felt just like I do today—the world is always changing." "It's your job," she would add, "to make sure that you keep up."

My thanks to the *Journal* for helping all of us to "keep up" as we enter the next millennium.